

HIGH-PURITY LOW-RESISTIVITY ELECTROSTATIC CHUCKS

Abstract of the Disclosure

The volume resistivity of a body consisting essentially of aluminum nitride is reduced by exposing the body to a soak temperature of at least about 1000°C in an atmosphere deficient in nitrogen, such as an atmosphere consisting essentially of argon. The body can be, for example, a green body of aluminum nitride powder of a densified, or sintered body, such as a polycrystalline body. An electrostatic chuck has an electrode within a chuck body. A first portion of the chuck body, at a first side of the electrode, has a volume resistivity less than about 1×10^{13} ohm·cm at about 23°C. A second portion of the body, at a second side of the electrode, has a volume resistivity within one order of magnitude that of the first portion.